

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A stereoscopic video signal generation circuit for supplying a stereoscopic video signal to a three-dimensional display, wherein the three-dimensional display, displaying two images in the left eye and the right eye with binocular parallax and then selectively retrieving one of the two images in one of the left eye and the right eye and other in other of both eyes, forms a stereoscopic image to show an observer by taking advantage of binocular disparity parallax, the stereoscopic video signal generation circuit comprising:

an information retrieving means for retrieving video information on the stereoscopic image and display information on the three-dimensional display as control information for controlling a display of each image video information including crosspoint (convergence point) information on a distance from a camera to a crosspoint of an optical axis of a left subject and an optical axis of a right subject when each of left image and right image is produced; and

an offset setting means for offsetting a left-eye image and a right-eye image relative to each other according to the [video] control information to adjust a stereoscopic depth of the image displayed.

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This arrangement can produce a stereoscopic image with its stereoscopic depth optimumly adjusted for the three-dimensional display.

Claim 2 (Currently Amended): A stereoscopic video signal generation circuit according to claim 1, wherein the information retrieving means retrieves as the video information at least one of information, comprising:

applicable screen size information ~~on a screen size as video information~~ suited for reproducing the stereoscopic image [or];

applicable viewing distance information ~~as the display information~~ on a distance from an observer to a screen suited for the observer to see the image as it is reproduced, ~~the applicable screen size information and the applicable viewing distance information being related to the stereoscopic image, ; and~~

~~the information retrieving means also retrieves as the display information at least screen size information on a screen size of the three-dimensional display or display information as the video information involving viewing distance information on a distance from the observer to the screen of the three-dimensional display,~~

wherein the offset setting means offsets the left-eye image and the right-eye image relative to each other according to one or more of the ~~applicable optimal~~ screen size information [,] ~~and~~ the applicable viewing distance information, ~~the screen size information and the viewing distance information~~ to adjust the stereoscopic depth of the image displayed.

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Claim 3 (Currently Amended): A stereoscopic video signal generation circuit according to claim 2, wherein the information retrieving means retrieves as the video information ~~camera distance~~ information on a distance between an optical axis of a left-eye camera and an optical axis of a right-eye camera ~~and crosspoint information on a distance from the observer to a crosspoint of the left-eye camera optical axis and the right-eye camera optical axis, the camera distance information and the crosspoint information being related to the stereoscopic image,~~

wherein the offset setting means offsets the left-eye image and the right-eye image relative to each other according to the camera distance information and the crosspoint (convergence point) information to adjust the stereoscopic depth of the image displayed.

Claim 4 (Currently Amended): A stereoscopic video signal generation circuit according to ~~any one of claims 1 to 3~~ claim 1, wherein the information ~~retrieving~~ input means retrieves information entered about the stereoscopic depth and the offset setting means offsets the left-eye image and the right-eye image relative to each other according to the information entered into the input means to adjust the stereoscopic depth of the image displayed.

Claim 5 (Original): A stereoscopic video signal generation circuit according to ~~any one of claims 1 to 4~~ claim 1, further comprising:

a left-eye image frame memory for storing the left-eye image and a right-eye image frame memory for storing the right-eye image;

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wherein the offset setting means has a timing control means for controlling a timing of reading video data from the left-eye image frame memory and/or the right-eye image frame memory, and the timing control means advances or delays the timing of reading the video data from one of the left-eye image frame memory and the right-eye image frame memory with respect to the timing of reading the video data from the other frame memory to offset the left-eye image and the right-eye image relative to each other.

Claim 6 (Original): A stereoscopic video signal generation circuit according to claim 5, further comprising:

a stereoscopic image frame memory for storing the stereoscopic image; and
a signal selection means for selecting between video data read out from the left-eye image frame memory and video data read out from the right-eye image frame memory and feeding the selected data into the stereoscopic image frame memory.

Claim 7 (Currently Amended): A stereoscopic video signal generation circuit according to ~~any one of claims 1 to 4~~ claim 1, wherein the left-eye image and the right-eye image are offset relative to each other by advancing or delaying a horizontal phase between the left-eye image and the right-eye image.

Claim 8 (Currently Amended): A stereoscopic video signal generation circuit according

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to any one of claims 1 to 7 claim 1, wherein, when the left-eye image and the right-eye image are offset, in left and/or right end blanked-out areas of the screen where information of the left-eye image and/or the right-eye image is not displayed, left or right edge portion of the left-eye image and/or the right-eye image near the blanked-out areas is displayed magnified horizontally and vertically.

Claim 9 (Currently Amended): A three-dimensional display which displays two images of a left image and a right image formed with binocular parallax and selectively retrieves one of the two images in one of the left eye and the right eye and other in other of both eyes for forming a stereoscopic image to show an observer by taking advantage of binocular disparity parallax, the three-dimensional display comprising: a stereoscopic video signal generation circuit for combining a left-eye image and a right-eye image to generate a stereoscopic video signal, a display for displaying the stereoscopic image and a driver circuit for driving the display;

wherein the stereoscopic video signal generation circuit has

an information retrieving means for retrieving as control information for controlling a display of each image video information on the stereoscopic image and display information on a display area of the display including crosspoint (convergence point) information on a distance from a camera to a crosspoint of an optical axis of the left subject and an optical axis of the right subject when each of left image and right image is produced, and

an offset setting means for offsetting the left-eye image and the right-eye image relative to each other according to the [video] control information and the display information to adjust a

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stereoscopic depth of the image displayed on the display;

wherein the driver circuit forms the stereoscopic image on the display according to the stereoscopic video signal output from the stereoscopic video signal generation circuit.

Claim 10 (Currently Amended): A three-dimensional display according to claim 9, further comprising: a memory means for storing screen size information as information on a display area of the display;

~~wherein the information retrieving means retrieves the screen size information from the memory means as the video information at least one of applicable screen size information as video information suited for reproducing the stereoscopic image, applicable viewing distance information on a distance from an observer to a screen suited for the observer to see the image as it is reproduced, and display information involving the applicable viewing distance information relative to the screen of the three-dimensional display.~~

wherein the offset setting means offsets the left-eye image and the right-eye image relative to each other according to the information which the memory means stores for reproducing the stereoscopic depth of the image displayed.

Claim 11 (Currently Amended): A three-dimensional display according to claim 9 [or 10], wherein the information retrieving means retrieves as the video information at least applicable screen size information on a screen size suited for reproducing the stereoscopic image or applicable viewing

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distance information on a distance from an observer to a screen suited for the observer to see the image as it is reproduced, the applicable screen size information and the applicable viewing distance information being related to the stereoscopic image, and

the information retrieving means also retrieves as the display information at least screen size information on a screen size of the three-dimensional display or viewing distance information on a distance from the observer to the screen of the three-dimensional display, distance information on a distance between an optical axis of a left-eye camera and an optical axis of a right-eye camera,

wherein the offset setting means offsets the left-eye image and the right-eye image relative to each other according to one or more of the applicable screen size information, the applicable viewing distance information, the screen size information and the viewing distance information the camera distance information and the crosspoint (convergence point) information to adjust the stereoscopic depth of the image displayed.

Claim 12 (Currently Amended): A three-dimensional display according to claim 9 [or 10], wherein the information retrieving means retrieves as the video information camera distance information on a distance between an optical axis of a left-eye camera and an optical axis of a right-eye camera and crosspoint information on a distance from the observer to a crosspoint of the left-eye camera optical axis and the right-eye camera optical axis, the camera distance information and the crosspoint information being related to the stereoscopic image; an input means for the observer to input information on the stereoscopic depth;

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wherein the offset setting means offsets the ~~left-eye~~ right-eye image and the ~~right-eye~~ left-eye image relative to each other according to the ~~camera distance information~~ and the crosspoint information to adjust the stereoscopic depth of the image displayed on the display ~~information entered into the input means.~~

Claim 13 (Currently Amended): A three-dimensional display according to claim 9 [or 12], further comprising: ~~an input means for the observer to input information on the stereoscopic depth;~~

~~wherein the offset setting means offsets the left-eye image and the right-eye image relative to each other according to the information entered into the input means to adjust the stereoscopic depth of the image displayed on the display~~ a left-eye image frame memory for storing the left-eye image and a right-eye image frame memory for storing the right-eye image;

wherein the offset setting means has a timing control means for controlling a timing of reading video data from the left-eye image frame memory and/or the right-eye image frame memory, and the timing control means advances or delays the timing of reading the video data from one of the left-eye image frame memory and the right-eye image frame memory with respect to the timing of reading the video data from the other frame memory to offset the left-eye image and the right -eye image relative to each other.

Claim 14 (Currently Amended): A three-dimensional display according to ~~any one of claims 9 to 13~~ claim 9, further comprising:

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a left-eye image frame memory for storing the left-eye image and a right-eye image frame memory for storing the right-eye image;

wherein the offset setting means has a timing control means for controlling a timing of reading video data from the left-eye image frame memory and/or the right-eye image frame memory, and the timing control means advances or delays the timing of reading the video data from one of the left-eye image frame memory and the right-eye image frame memory with respect to the timing of reading the video data from the other frame memory to offset the left-eye image and the right-eye image relative to each other

a stereoscopic image frame memory for storing the stereoscopic image; and
a signal selection means for selecting between right-eye image data read out from the right-eye
image frame memory and left-eye image data read out from the left-eye image frame memory and
feeding the selected data into the stereoscopic image frame memory.

Claim 15 (Currently Amended): A three-dimensional display according to any one of claims 9 to 14 claim 9, further comprising:

a stereoscopic image frame memory for storing the stereoscopic image; and
a signal selection means for selecting between left-eye image data read out from the left-eye
image frame memory and right-eye image data read out from the right-eye image frame memory and
feeding the selected data into the stereoscopic image frame memory

wherein the right-eye image and the left-eye image are offset relative to each other by

advancing or delaying a horizontal phase between the right-eye image and the left-eye image.

Claim 16 (Currently Amended): A three-dimensional display according to any one of claims 9 to 15 claim 9, wherein, the left-eye image and the right-eye image are offset relative to each other by advancing or delaying a horizontal phase between the left-eye image and the right-eye image when the right-eye image and the left-eye image are offset, in right and/or left end blanked-out areas of the screen where information of the right-eye image and/or the left-eye image is not displayed, right or left edge portion of the right-eye image and/or the left-eye image near the blanked-out portions is displayed magnified horizontally and vertically.

Claim 17 (Canceled).